



Mylar Light Box

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TOOLS:

- [Pencil \(1\)](#)
- [Ruler \(1\)](#)
- [Scissors \(1\)](#)
- [Scotch tape \(1\)](#)

PARTS:

- [Cardboard box \(1\)](#)
- [Mylar sheet \(1\)](#)
- [Tracing paper \(1\)](#)
- [Plastic \(1\)](#)

SUMMARY

This project was created by Ryoko, a member of the Learning Studio at the Exploratorium in San Francisco.

She was inspired by something called "Hikari no Hako" (which means "light box" in Japanese). It is a craft kit released in Japan by the artist [Taizo Matsumura](#) a few years ago. Since it's not available to purchase in the US yet, she decided to make her own version.

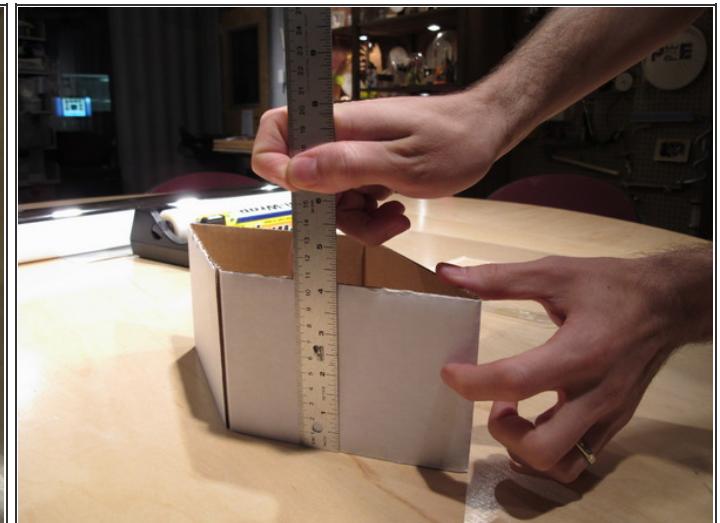
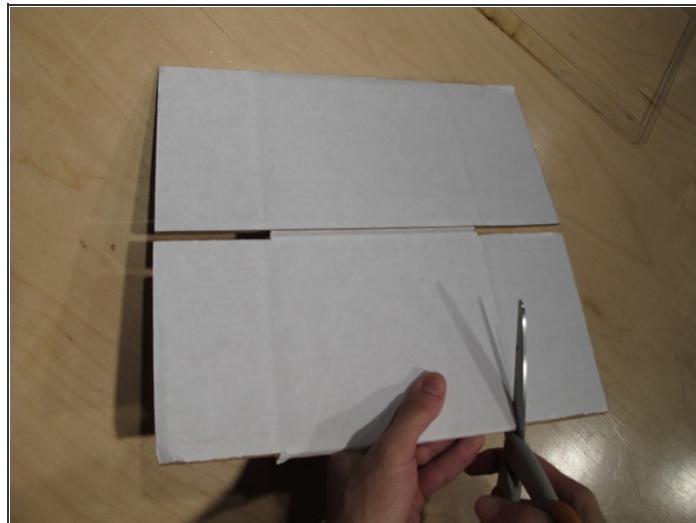
The project is composed of a cardboard box, Mylar, tracing paper, and transparent plastic. You fill up the box with rolled Mylar, then cover the top with tracing paper and the back with the transparent cover. By changing the angle of the box as you move it over various light sources, you can notice lovely patterns of the light reflected through the Mylar.

Step 1 — Mylar Light Box



- Gather materials.

Step 2



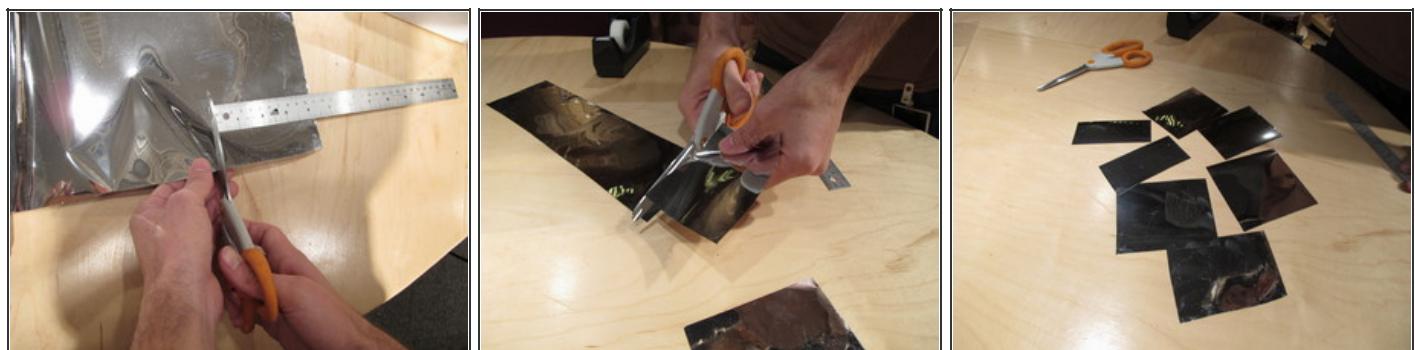
- Cut flaps off box.
- Trim box to desired height (ours was about 4 inches).

Step 3



- Cut a piece of tracing paper that fits one side of the box.
- Use Scotch tape to attach the tracing paper to one open side of the box.

Step 4



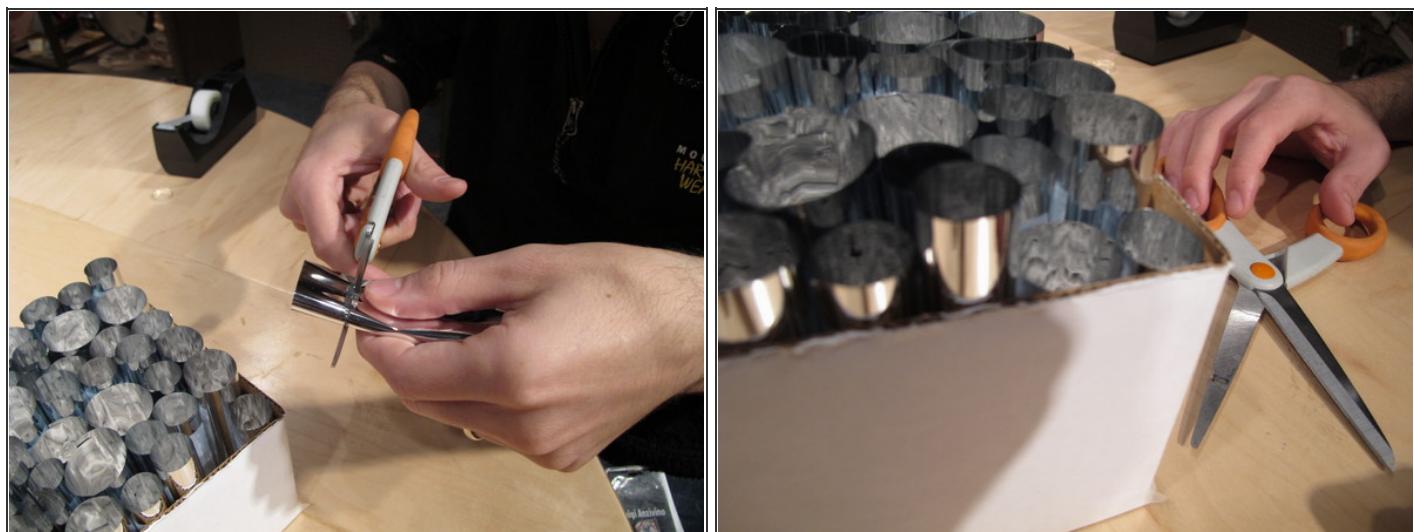
- Cut a strip of Mylar a little bit taller then the height of your box.
- Cut strip into random lengths.

Step 5



- Roll Mylar piece into a tube and tape along edge.
- Place in box and repeat until you have tubes of varying diameters snugly fit together in the box.

Step 6



- Once box is full of tubes, trim them down until they all stand slightly below the top of the box.

Step 7



- Measure and cut transparent plastic sheet to fit on the open side of the box.
- Tape the plastic piece onto the cardboard box on the side opposite the tracing paper.

Step 8



- Place the box in front of different light sources to see the beautiful reflective patterns.
- Try different sizes and shapes of boxes.

Now you can take your light box and explore the world around you. Look at lights in your house. Hold it against your TV screen. Take it outside and check out the sunset.

We tried it out at several exhibits at the Exploratorium through the light box.

Here's a [video](#) of our explorations.

To learn more read [the Learning Studio Blog post](#).

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